

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS:

1. (previously presented) In a storage system employed in a client-server network, an interface operating between a first protocol and a second protocol, said storage system including object manager means operative in accordance with said second protocol, said interface comprising:

means for receiving first information in accordance with said first protocol from said client;

means, operatively coupled to said receiving means, for determining that said first protocol is acceptable to allow further processing of said first information in said system;

means, responsive to operation of said determining means, for translating said first information into second information compatible with said second protocol;

means for forwarding said second information to said object manager means and, responsive to said object manager means managing said second information, for receiving a managed response thereto from said object manager means;

means for reverse-translating said managed response into an equivalent response compatible with said first protocol; and,

means for forwarding said equivalent response to said client.

2. (original) The interface of claim 1 and wherein said first protocol is CIM/XML/HTTP.
3. (original) The interface of claim 2 and wherein said second protocol is WMI/DCOM.
4. (original) The interface of claim 1 and wherein said determining means further comprises:
 - means for establishing a plurality of acceptable protocols;
 - means for comparing said first protocol against said plurality of acceptable protocols seriatim until said first protocol matches one of said plurality of protocols; and,
 - means, responsive to operation of said comparing means for allowing said further processing.
5. (original) The interface of claim 4 and wherein the result of said operation of said comparing means not obtaining a match is that said further processing is not allowed.
6. (original) The interface of claim 4 and wherein said plurality of protocols includes: CIM/XML/HTTP and SOAP/HTTP/WBEM.
7. (original) The interface of claim 1 and wherein said translating means includes said reverse-translating means.

8. (original) The interface of claim 6 and wherein said translating means includes said reverse-translating means.

9. (original) The interface of claim 3 and wherein said determining means further comprises:

means for establishing a plurality of acceptable protocols;

means for comparing said first protocol against said plurality of acceptable protocols seriatim until said first protocol matches one of said plurality of protocols; and,

means, responsive to operation of said comparing means for allowing said further processing.

10. (currently amended) In a storage system employed in a client-server network, a method for interfacing between a first protocol and a second protocol comprising:

receiving first information in accordance with said first protocol from said client;

determining that said first protocol is acceptable to allow further processing of said first information in said system;

translating, in response to said determining, said first information into second information compatible with said second protocol;

establishing an object manager operative in accordance with said second protocol;

forwarding said second information to said object manager and, responsive to said object manager managing said second information, receiving a managed response thereto from said object manager;

reverse-translating said managed response into an equivalent response compatible with said first protocol; and,

forwarding said equivalent response to said client.

11. (original) The method of claim 10 and wherein said first protocol is CIM/XML/HTTP.

12. (original) The method of claim 11 and wherein said second protocol is WMI/DCOM.

13. (original) The method of claim 1 and wherein said determining further comprises:

establishing a plurality of acceptable protocols;

comparing said first protocol against said plurality of acceptable protocols seriatim until said first protocol matches one of said plurality of protocols; and,

allowing said further processing.

14. (original) The method of claim 13 and wherein the result of said operation of said comparing not obtaining a match is that said further processing is not allowed.

15. (original) The method of claim 13 and wherein said plurality of protocols includes: CIM/XML/HTTP and SOAP/HTTP/WBEM.

16. (original) The method of claim 10 and wherein said translating includes said reverse-translating.

17. (original) The method of claim 15 and wherein said translating includes said reverse-translating.

18. (original) The method of claim 12 and wherein said determining further comprises:

establishing a plurality of acceptable protocols;

comparing said first protocol against said plurality of acceptable protocols

seriatim until said first protocol matches one of said plurality of protocols; and,

allowing said further processing.

19. (currently amended) A computer program product for use on a computer to be operated within a client-server network employing a storage area network including at least one storage system, said computer program product functioning to interface between a first communication protocol and a second communication protocol and comprising a computer usable medium having computer readable program code thereon, said computer readable program code comprising:

program code for receiving first information in accordance with said first protocol from said client;

program code for determining that said first protocol is acceptable to allow further processing of said first information in said system;

program code, responsive to execution of said program code for determining, for translating said first information into second information compatible with said second protocol;

program code for establishing an object manager operative in accordance with said second protocol;

program code for forwarding said second information to said object manager and, responsive to said object manager managing said second information, receiving a managed response thereto from said object manager;

program code for reverse-translating said managed response into an equivalent response compatible with said first protocol; and,

program code for forwarding said equivalent response to said client.

20. (original) The computer program product of claim 19 and wherein said first protocol is CIM/XML/HTTP.

21. (original) The computer program product of claim 20 and wherein said second protocol is WMI/DCOM.

22. (original) The computer program product of claim 19 and wherein said program code for determining further comprises:

program code for establishing a plurality of acceptable protocols;

program code for comparing said first protocol against said plurality of acceptable protocols seriatim until said first protocol matches one of said plurality of protocols; and,

program code for allowing said further processing.

23. (original)) The computer program product of claim 22 and wherein the result of operation of said program code for comparing not obtaining a match is that said further processing is not allowed.

24. (original) The computer program product of claim 22 and wherein said plurality of protocols includes: CIM/XML/HTTP and SOAP/HTTP/WBEM.

25. (original) The computer program product of claim 19 and wherein said program code for translating includes said program code for reverse-translating.

26. (original) The computer program product of claim 24 and wherein said program code for translating includes said program code for reverse-translating.

27. (original) The computer program product of claim 21 and wherein said program code for determining further comprises:

program code for establishing a plurality of acceptable protocols;

program code for comparing said first protocol against said plurality of acceptable protocols seriatim until said first protocol matches one of said plurality of protocols; and,

program code for allowing said further processing.

28. (currently amended) Apparatus to be operated within a client-server network employing a storage area network including at least one storage system, said apparatus functioning to interface between a first communication protocol and a second communication protocol and comprising:

first information receiver for receiving first information in accordance with said first protocol from said client;

first protocol acceptor for determining that said first protocol is acceptable to allow further processing of said first information in said system;

first information translator, responsive to operation of said first protocol acceptor, for translating said first information into second information compatible with said second protocol;

an object manager operative in accordance with said second protocol;

forwarding and receiving apparatus for forwarding said second information to said object manager and, responsive to said object manager managing said second information, receiving a managed response thereto from said object manager;

reverse translator for reverse-translating said managed response into an equivalent response compatible with said first protocol; and,

equivalent response forwarder for forwarding said equivalent response to said client.

29. (original) The apparatus of claim 28 and wherein said first protocol is CIM/XML/HTTP.

30. (original) The apparatus of claim 29 and wherein said second protocol is WMI/DCOM.

31. (original) The apparatus of claim 28 and wherein said first protocol acceptor for determining further comprises:

plurality of protocols acceptor for establishing a plurality of acceptable protocols;

a comparator for comparing said first protocol against said plurality of acceptable protocols seriatim until said first protocol matches one of said plurality of protocols; and,

further processing apparatus for allowing said further processing.

32. (original) The apparatus of claim 31 and wherein the result of operation of said comparator not obtaining a match is that said further processing is not allowed.

33. (original) The apparatus of claim 31 and wherein said plurality of protocols includes: CIM/XML/HTTP and SOAP/HTTP/WBEM.

34. (original) The apparatus of claim 28 and wherein said first information translator for translating includes said reverse translator for reverse-translating.

35. (original) The apparatus of claim 26 and wherein said first information translator for translating includes said reverse translator for reverse-translating.

36. (original) The apparatus of claim 30 and wherein said first protocol acceptor for determining further comprises:

plurality of protocols acceptor for establishing a plurality of acceptable protocols;

a comparator for comparing said first protocol against said plurality of acceptable protocols seriatim until said first protocol matches one of said plurality of protocols; and,

further processing apparatus for allowing said further processing.

37. (previously presented) In a client-server network, an interface operating between a first protocol and a second protocol, said server including an object manager operative in accordance with said second protocol, said interface configured to:

receive first information in accordance with said first protocol from said client;

determine, in response to receiving said first information, that said first protocol is acceptable to allow further processing of said first information in said server;

translate, in response to determining said first protocol acceptable, said first information into second information compatible with said second protocol;

forward said second information to said object manager and, responsive to said object manager managing said second information, receive a managed response thereto from said object manager;

reverse-translate said managed response into an equivalent response compatible with said first protocol; and,

forward said equivalent response to said client.

38. (currently amended) In a client-server network, a method for interfacing between a first protocol and a second protocol comprising:

receiving first information in accordance with said first protocol from said client;

determining that said first protocol is acceptable to allow further processing of said first information in said server;

translating, in response to determining that said first protocol is acceptable, said first information into second information compatible with said second protocol;

establishing an object manager operative in accordance with said second protocol;

forwarding said second information to said object manager and, responsive to said object manager managing said second information, receiving a managed response thereto from said object manager;

reverse-translating said managed response into an equivalent response compatible with said first protocol; and,

forwarding said equivalent response to said client.

39. (currently amended) A computer program product for use on a computer to be operated within a client-server network, said computer program product functioning to interface between a first communication protocol and a second communication protocol and comprising a computer usable medium having computer readable program code thereon, said computer readable program code comprising:

program code for receiving first information in accordance with said first protocol from said client;

program code for determining that said first protocol is acceptable to allow further processing of said first information in said server;

program code, responsive to execution of said program code for determining, for translating said first information into second information compatible with said second protocol;

program code for establishing an object manager operative in accordance with said second protocol;

program code for forwarding said second information to said object manager and, responsive to said object manager managing said second information, receiving a managed response thereto from said object manager;

program code for reverse-translating said managed response into an equivalent response compatible with said first protocol; and,

program code for forwarding said equivalent response to said client.